

WHAT IS CLAIMED IS:

1. A gypsum board having a coating applied thereon, the gypsum board comprising:

5 a gypsum core having a first side and a second side and a facing sheet disposed on the first side; and

a coating disposed on at least a portion of the facing sheet, wherein at least a portion of the coating penetrates through at least a portion of the facing sheet and into the gypsum core.

10 2. The gypsum board of claim 1, wherein the coating penetrates into the gypsum core to a substantially uniform depth across an area of the gypsum board.

3. The gypsum board of claim 1, wherein a thickness of the coating is up to 30 mils.

15 4. The gypsum board of claim 3, wherein the thickness of the coating is preferably 3-20 mils.

5. The gypsum board of claim 1, wherein the coating is a joint compound.

6. The gypsum board of claim 1, wherein the coating comprises:

25 25-75 wt. % water;

30-70 wt. % calcium carbonate;

0-30 wt. % filler;

2-10 wt. % latex emulsion; and

0-10 wt. % additives.

7. The gypsum board of claim 6, wherein the filler comprises one or more of mica, talc, clay, and limestone.

8. The gypsum board of claim 6, wherein the composition further comprises a pigment in an amount sufficient to provide a desired tint to the coating.

9. The gypsum board of claim 1, wherein the coating comprises:
10-60 vol. % water;
50-90 vol. % calcined gypsum;
0.1-10 vol. % binder;
0-50 vol. % limestone;
0-10 vol. % clay;
0-30 vol. % other fillers; and
0-10 vol % additives.

10. The gypsum board of claim 9, wherein the composition further comprises a pigment in an amount sufficient to provide a desired tint to the coating.

11. The gypsum board of claim 9, wherein the facing sheet is made from unbleached grey paper and the coating is comprised primarily of calcium carbonate or gypsum.

12. The gypsum board of claim 9, wherein the facing sheet of the completed board has a level 5 finish, as defined herein.

13. A gypsum board having a coating applied thereon, the gypsum board comprising:

a gypsum core having a first side and a second side and a facing sheet disposed on the first side; and

a coating disposed on at least a portion of the facing sheet such that the facing sheet has a level 5 finish after manufacture and prior to applying the gypsum board in an intended application.

14. The gypsum board of claim 13, wherein the coating is primarily calcium carbonate or gypsum.

15. A gypsum board having a coating applied thereon, the gypsum board comprising:

a gypsum core having a first side and a second side and a facing sheet disposed on the first side; and

a coating disposed on at least a portion of the facing sheet such that the facing sheet has a level 4 finish after manufacture and prior to applying the gypsum board in an intended application.

16. A kit comprising a quantity of joint compound and a plurality of gypsum boards having a coating applied thereon, each of the gypsum boards comprising:

a gypsum core having a first side and a second side and a facing sheet disposed on the first side; and

a coating disposed on at least a portion of the facing sheet; and
the coating is a diluted form of the joint compound.

17. The kit of claim 16, wherein the coating is primarily calcium carbonate or gypsum.

18. The kit of claim 16, wherein the coating is such that the facing sheet has a level 5 finish after manufacture and prior to applying the gypsum board in an intended application.

5 19. The kit of claim 18, wherein the coating is primarily calcium carbonate or gypsum.

20. A method of producing a coated gypsum board, the method comprising:

depositing a gypsum slurry to form a wet gypsum board having a gypsum core;

10 applying a coating to the wet gypsum board; and
drying the wet gypsum board,

wherein the step of applying the coating occurs prior to the step of drying and the coating penetrates through at least a portion of the facing sheet and into at least a portion of the gypsum core.

15 21. The method of claim 20, wherein the coating is a diluted joint compound.

22. A method of producing a coated gypsum board, the method comprising:

20 depositing a gypsum slurry to form a wet gypsum board having a gypsum core;

applying a coating to the wet gypsum board; and
drying the wet gypsum board,

wherein the step of applying the coating occurs prior to the step of drying and the coating is a diluted joint compound.

23. A method of producing a coated gypsum board, the method comprising:

depositing a gypsum slurry to form a wet gypsum board having a gypsum core;

5 applying a coating to the wet gypsum board; and
drying the wet gypsum board,

wherein the step of applying the coating occurs prior to the step of drying and the coated board has a level 5 finish prior to assembly in its intended use.

10 24. A method of making a wall, comprising:

depositing a gypsum slurry to form a wet gypsum board having a gypsum core;

applying a coating to the gypsum board;

15 fastening the coated gypsum board to a support structure to form the wall; and

taping and finishing seams between adjacent coated gypsum boards using a joint compound having substantially a same solids content as the composition of the coating.

25. A method of making a wall, comprising:

20 depositing a gypsum slurry to form a wet gypsum board having a gypsum core;

applying a coating to the wet gypsum board;

drying the wet gypsum board, wherein the step of applying the coating occurs prior to the step of drying;

25 fastening the coated gypsum board to a support structure to form the wall; and

taping and finishing seams between adjacent coated gypsum boards using a joint compound having a composition substantially similar to the composition of the coating.

26. A method of making a wall, comprising:

5 fastening a coated gypsum board to a support structure to form the wall, wherein the board is in accordance with one of claims 1, 13, or 15; and
taping and finishing seams between adjacent coated gypsum boards using a joint compound having substantially a same solids content as the composition of the coating.

27. A method of making a wall, comprising:

10 fastening a coated gypsum board to a support structure to form the wall, wherein the board is made in accordance with one of claims 20, 22, or 23; and
taping and finishing seams between adjacent coated gypsum boards using a joint compound having a composition substantially similar to the composition of
15 the coating.